



# Exhibit F

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AFFIDAVIT

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Commissioner:

I, Robert E. Schneider, herewith affirm as follows.

(A) I was born on November 22, 1943; and I am a U.S. Citizen.

(B) I presently live at 1015 Central Avenue, Wilmette, Illinois 60091.

(C) In June 1966 I received a Bachelor's Degree in Electrical Engineering from Northwestern University, Evanston, Illinois; and

in June 1971 I received a Master's Degree in Electrical Engineering from Illinois Institute of Technology, Chicago, Illinois.

(D) I have practiced Electrical and Electronics Engineering since June 1966, as follows.

1. Between June 1966 and December 1968, as a Junior Engineer, I did engineering design work on class B stepped and quasi-squarewave inverters at Vapor Corporation of Chicago, Illinois.

2. Between December 1968 and February 1970, as a Project Engineer, I did engineering design work related to power supplies and waveshaping circuits at SCM Kleinschmidt, Deerfield, Illinois.

3. Between March 1970 and January 1974, as Senior Project Engineer at Vapor Corporation of Chicago, Illinois, I was responsible for projects related to the design of aircraft controls and power supplies.

4. Between January 1974 and October 1976, as Program Manager at SCM Kleinschmidt in Deerfield, Illinois, I was responsible for design activities related to a microcomputer-controlled optical character reader.

5. Between November 1976 and August 1977, as Manager of design Engineering at Norlin Music in Lincolnwood, Illinois, I directed engineering activities related to the design of computer-based music instruction systems.

6. Between September 1977 and August 1979, as Group Manager at Extel Corporation in Northbrook, Illinois, I directed the activities of six engineers engaged in electronic product design activities.

7. Between September 1979 and January 1983, as Product Manager at Bell & Howell Company in Skokie, Illinois, I was responsible for the marketing of the Company's computer products.

8. Since January 1983 I have been in business for myself doing design and development work related to high frequency power supplies, microcomputer systems, and HVAC controls. During this period, about one third of my time has been spent on the design, development and construction of high frequency inverter-type power supplies, including ballasts for fluorescent lamps.

(E) In total, I have spent more than 10 years in the design, development, construction, testing and evaluation of electronic power supplies in general and electronic inverter-type power supplies in particular, and I have accumulated substantial experience in the art of power supplies, particularly electronic inverter-type power supplies and electronic inverter-type ballasts for fluorescent lamps.

Consequently, I believe I have at least ordinary skill in the art of electronic inverter-type power supplies and electronic inverter-type ballasts for gas discharge lamps.

(F) I have read, and I am familiar with the teachings of, each one of the prior art references identified on page 3 hereof.

Prior Art References

- \* U.S. Patent No. 1,292,659 to Speed;
- \* U.S. Patent No. 2,587,169 to Kivari;
- \* U.S. Patent No. 2,721,929 to Schwartz et al.;
- \* U.S. Patent No. 2,923,856 to Greene et al.;
- \* U.S. Patent No. 2,965,856 to Roesel;
- \* U.S. Patent No. 3,368,164 to Shapiro;
- \* U.S. Patent No. 3,496,518 to Neumann et al.;
- \* U.S. Patent No. 3,541,504 to Bush;
- \* U.S. Patent No. 3,525,012 to Dimitracopoulos et al.;
- \* U.S. Patent No. 3,679,931 to Powell;
- \* U.S. Patent No. 3,681,654 to Quinn;
- \* U.S. Patent No. 3,710,177 to Ward;
- \* U.S. Patent No. 3,727,104 to Neal et al.;
- \* U.S. Patent No. 3,801,865 to Roberts;
- \* U.S. Patent No. 3,835,333 to Balan;
- \* U.S. Patent No. 3,868,561 to Matthes;
- \* U.S. Patent No. 3,906,337 to Depenbrock;
- \* U.S. Patent No. 3,939,362 to Grimes et al.;
- \* U.S. Patent No. 3,996,493 to Davenport et al.;
- \* U.S. Patent No. 4,001,571 to Martin;
- \* U.S. Patent No. 4,008,414 to Agnew;
- \* U.S. Patent No. 4,057,750 to Elms et al.;
- \* U.S. Patent No. 4,100,476 to Ghiringhelli;
- \* U.S. Patent No. 4,104,715 to Lawson;
- \* U.S. Patent No. 4,151,445 to Davenport et al.;
- \* U.S. Patent No. 4,158,793 to Lewis;
- \* U.S. Patent No. 4,184,128 to Nilssen;
- \* U.S. Patent No. 4,207,497 to Capewell et al.;
- \* U.S. Patent No. 4,207,498 to Spirai et al.;
- \* U.S. Patent No. 4,260,943 to Zaderej et al.;
- \* U.S. Patent No. 4,262,327 to Kovacik et al.;
- \* U.S. Patent No. 4,277,726 to Burke;
- \* U.S. Patent No. 4,277,728 to Stevens;
- \* U.S. Patent No. 4,293,799 to Roberts;
- \* U.S. Patent No. 4,295,079 to Otsuka et al.;
- \* U.S. Patent No. 4,300,073 to Skwirut et al.;
- \* U.S. Patent No. 4,307,353 to Nilssen;
- \* U.S. Patent No. 4,330,736 to Perper;
- \* U.S. Patent No. 4,347,460 to Latassa et al.;
- \* U.S. Patent No. 4,354,120 to Schornack;
- \* U.S. Patent No. 4,367,434 to Miller;
- \* U.S. Patent No. 4,386,292 to Rothwell et al.;
- \* U.S. Patent No. 4,406,976 to Wisbey et al.;
- \* U.S. Patent No. 4,414,617 to Galindo;
- \* U.S. Patent No. 4,438,372 to Zuchtriegel;
- \* U.S. Patent No. 4,443,778 to Mewissen;
- \* U.S. Patent No. 4,463,277 to DeCaro;
- \* U.S. Patent No. 4,464,606 to Kane;
- \* U.S. Patent No. 4,499,403 to Leppelmeier et al.;
- \* U.S. Patent No. 4,503,363 to Nilssen;
- \* U.S. Patent No. 4,504,895 to Steigerwald;
- \* U.S. Patent No. 4,507,698 to Nilssen;
- \* U.S. Patent No. 4,508,996 to Clegg et al.;
- \* U.S. Patent No. 4,538,095 to Nilssen;
- \* U.S. Patent No. 4,560,908 to Stupp et al.;
- \* U.S. Patent No. 4,613,943 to Pacholok;
- \* U.S. Patent No. 4,684,850 to Stevens;
- \* U.S. Patent No. 4,692,667 to Nilssen;
- \* U.S. Patent No. 4,731,551 to Gibbs et al.;
- \* Canadian Patent No. 633,937 to Waller et al.
- \* Japanese Patent No. 57-135689 to Matsushita;  
(Abstract Only)
- \* French Patent No. 77 03324 to Peusset;
- \* Pages 44-50, IEEE Spectrum, February, 1969: "Lethal electric currents" by Dalziel;
- \* Pages 130-133, PCI April 1983 PROCEEDINGS, by Baker;
- \* Pages 18-23, Lighting & Design Applications, March 1976;
- \* Page 148, Electronic Design 24, November 22, 1975;

(G) I have been informed to the effect that:

(1) the Commissioner rejected certain claims in an application for a patent for the reason that the Commissioner held the claimed invention to be obvious over prior art;

(2) as evidence of obviousness, the Commissioner cited the following prior art reference, a copy of which has been received by me:

U.S. Patent No. 4,207,498 to Spira et al.;

(3) the Commissioner held that the teachings of the Spira patent, when combined with publicly known prior art, rendered the claimed invention obvious;

(4) more particularly, the Commissioner held that by making --- on the basis of publicly known prior art -- a desirable obvious modification and/or adaptation of the teachings of the Spira patent the claimed invention would result;

(5) in other words, the Commissioner held that -- in view of publicly known prior art -- the claimed invention merely constitutes an obvious modification and/or adaptation of the teachings of the Spira patent.

(H) I have not seen the application for patent identified in section (G) above, nor have I seen the claims thereof. More particularly, I have not received a description of the claimed invention.

(I) I have been requested:

(1) to carefully study and consider the cited reference in light of the situation described in section (G) above;

(2) to identify each and every instance of what -- in view of published prior art known to me -- I see as a desirable obvious modification and/or adaptation of Spira's teachings;

(3) to express in writing each one of those desirable obvious modifications and/or adaptations.

(J) I have performed the study and consideration requested of me in section (I) above, having spent therefor an amount of time that I judged to be reasonable; and I herewith set forth in writing each and every one of those desirable obvious modifications and/or adaptations, as follows:

(1) Spira's invention allows the inverter output to float. This could lead to problems in an installation such as RFI and shock hazard if there is a short. Establish a ground connection from, perhaps, the common point of the two lamps.

(2) Spira's approach suffers from handling the power too many times. The power factor inductor 90, the resonant circuit 55, the inverter transformer (primary and secondary) 58, and the ballast inductor all handle the power to the lamps.

Otherwise, I did not see any obvious beneficial modifications and/or adaptations of Spira's teachings.



Robert E. Schneider

STATE OF ILLINOIS)  
                      ) ss  
COUNTY OF COOK    )



SEAL

Sworn to and subscribed before me this 3 day of  
March, 1990.



Shirley Foss  
Notary Public